

THE NEARCTIC SAWFLIES OF THE GENUS RHOGOGASTER (Hymenoptera)

BY HERBERT H. ROSS

Illinois Natural History Survey, Urbana, Illinois

In North America, the sawfly genus *Rhogogaster* Konow is primarily a western genus, being represented most abundantly in the Rocky Mountain region from British Columbia to California. The genus comprises a group of four medium sized species which are uniformly green with black markings on the dorsum and legs. Fifteen names have been proposed for the nearctic members of the genus; three of these belong to other genera and some of the remainder must be reduced to synonymy. Color patterns on head, pleurae, and abdomen vary considerably in shape and extent of the black areas, and are of only limited use for identification. Characters of the genitalia, especially the saws, have reliable identification characters.

Our species fall into two natural groups: one, with flat head and shorter eyes, includes *lateraria* (Cresson) and *addenda* (Cresson); the other, with slightly rounder head and longer eyes, includes *californica* (Norton) and the holarctic *viridis* (Linnaeus). The generic synonymy and definition has been given by Ross (1937:104)*.

KEY TO NEARCTIC SPECIES

1. Apical sternite cleft with a sheath, fig. 6, females.....2
 Apical sternite not divided along meson, males.....5
2. Pectus green or straw-color.....3
 Pectus black4
3. Lancet with ventral lobes close together, spurette in a depression and not projecting above it, fig. 9.....*californica*
 Lancet with ventral lobes further apart, spurette projecting above level of depression, fig. 8.....*viridis*
4. Lancet with spurrettes arising from depression at base of ventral lobes, fig. 10; abdominal tergites with dorsal area black, latero-ventral portion almost entirely green.....*addenda*
 Lancet with spurrettes arising from ventral lobe above depression, fig. 11; abdominal tergites more banded in appearance, the dorsal black area of each tergite continuing as a band down the latero-ventral portion.....*lateraria*
5. Costa and stigma entirely green or whitish.....6
 Costa and apex of stigma dark brown or black.....7

* Illinois Biological Monographs 15:1-173; 1937.

6. Head of penis valves more or less rectangular, fig. 2..*californica*
 Head of penis valves hatchet-shaped, fig. 1.....*viridis*
7. Mesopleurae and pectus separated by a broad black stripe
 which extends to, or almost to, the posterior margin of the
 pectus; praeputial processes no longer than width at apex,
 fig. 4*lateraria*
 Mesopleurae and pectus without a separating dark band or this
 band irregular and extending only midway across sclerite;
 praeputial processes longer than width at apex, fig. 5....*addenda*

RHOOGASTER VIRIDIS (LINNAEUS)

Tenthredo viridis Linnaeus, Systema Naturae, 10th ed.: 557, 1758.

Rhogogaster ruga MacGillivray, Can. Ent. 60:160; 1923. ♀. *New synonymy.*

Rhogogaster respectus MacGillivray, N. Y. Ent. Soc. Jour. 31:165; 1923. ♂. *New synonymy.*

This species has the habitus of some species of *Tenthredo*, being robust, about 10 mm. long, bright green in life with black markings on dorsum of head and thorax, and with the dorsum of the abdomen black. The sheath, fig. 6, is round at apex compared to the more pointed sheath of *californica*, figs. 7A and B; this difference, however, is not sufficiently marked to be useful for diagnosis. The male frequently has the black on the abdomen reduced to narrow, transverse bars.

The species occurs throughout the Rocky Mountain region from Alaska to California, but apparently extends east only as far as Manitoba; it is recorded from many localities in northern Europe and Asia. Available data indicate a flight range from mid-May to mid-July.

Distribution Records.—ALASKA: Eagle, Katmai, Skagway. ALBERTA: Edmonton, Fawcett, Gull Lake, High Prairie, Wabamum, Waterton, Wetaskewin. BRITISH COLUMBIA: Great Divide. CALIFORNIA: Carville, Lassen National Park, Meadow Valley, Nash Mine. MANITOBA: Birtle, Husavick. MONTANA: Lake McDonald, Glacier National Park. YUKON: Hootalinqua.

RHOOGASTER CALIFORNICA (NORTON)

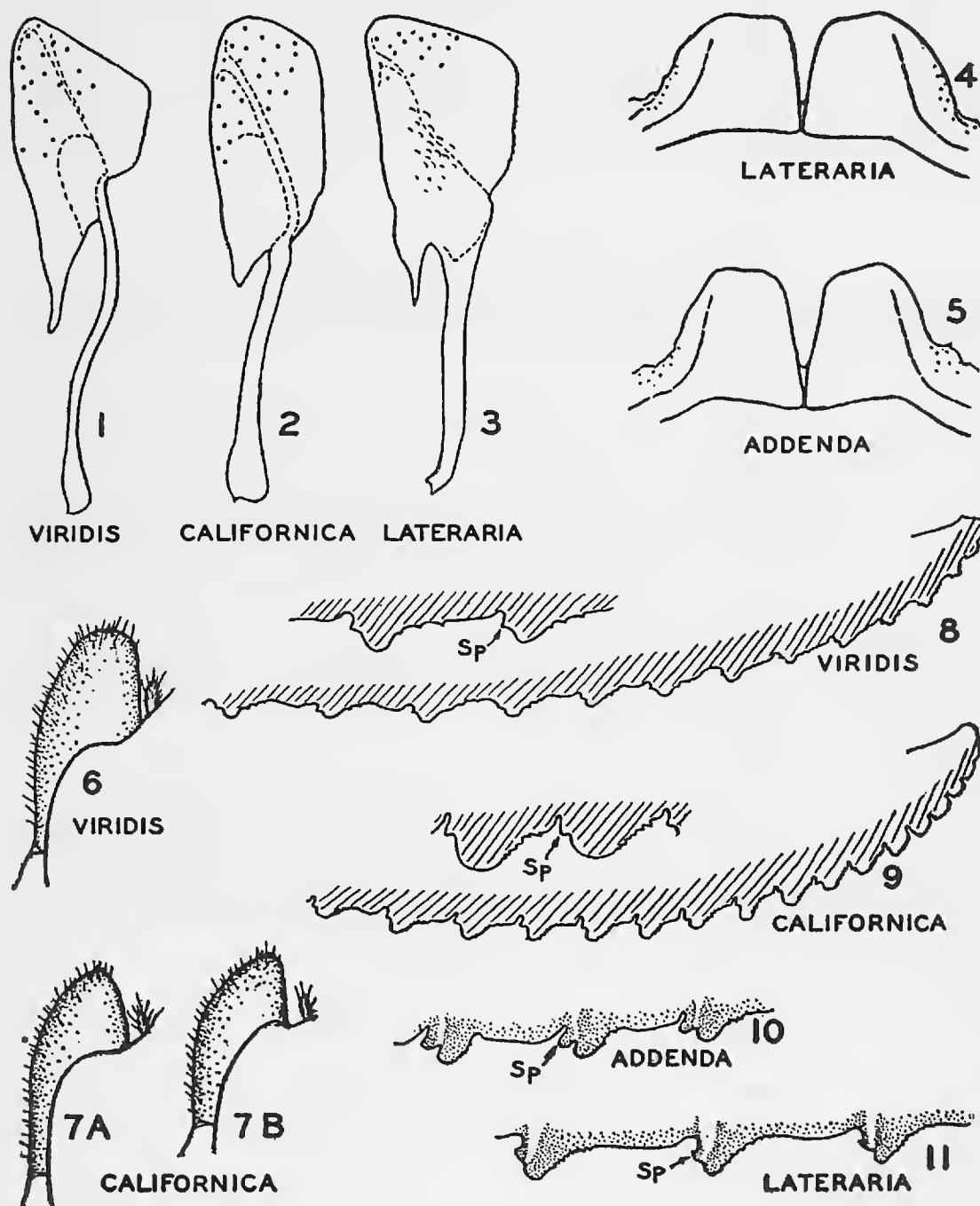
Tenthredo californicus Norton, Ent. Soc. Phil. Proc. 1:198; 1862. ♀.

Tenthredopsis evansii Harrington, Can. Ent. 21:98; 1889. ♀. *New synonymy.*

Tenthredo ripula MacGillivray, N. Y. Ent. Soc. Jour. 31:109; 1923. ♂. *New synonymy.*

This resembles *viridis* in external characteristics but is dis-

tinguished in both sexes by differences in genitalia. Its distribution embraces not only the western portion of North America but also a band across the northern part of the continent extending



EXPLANATION OF FIGURES

Parts of *Rhogogaster*, Figs. 1-3, penis valves. Figs. 4-5, praeputial lobes. Figs. 6-7, sheaths. Figs. 8-11, ventral margin of saws. sp—spurette.

to the Atlantic coast. It has essentially the same seasonal timing as *viridis*, from May to mid-July.

Distribution Records.—ALBERTA: Banff, Beaver Lodge, Fawcett, Gull Lake, Rodner, Waterton. CALIFORNIA: Hopland, Lake

Tahoe, Lassen, Modoc County, Plumas County, Sequoia National Park, Sonoma County, Trinity County, Truckee, Tulare County, Yosemite Valley. COLORADO: Longs Peak Inn. IDAHO: Worley. MANITOBA: Aweme, Birtle. MICHIGAN: Douglas Lake. MONTANA: Drummond, Florence, Gallatin County. NEW YORK: Karner. ONTARIO: Sudbury. OREGON: Corvallis, Eagle Ridge. UTAH: LaSal Mountains. WASHINGTON: North Yakima. YUKON: Whitehorse.

RHOOGASTER LATERARIA (CRESSON)

Tenthredo lateraria Cresson, Amer. Ent. Soc. Trans. 8:23; 1880. ♀.

Tenthredo retosta MacGillivray, N. Y. Ent. Soc. Jour. 31:109; 1923.

♂. *New synonymy.*

This species is smaller and with much more solid and extensive black areas than the preceding two, the abdomen appearing banded. The head is markedly flattened dorsad and wider than high. The species is restricted to the Rocky Mountain region and has not been taken north of Salmon Arm, B. C. It is a spring form, first collection date being March 21, at Corte Madero Creek, California, latest being July 22, at an elevation of 6,000 feet in the Blue Mountains in Oregon.

Distribution Records.—ALBERTA: Waterton. BRITISH COLUMBIA: Okanagan Falls, Salmon Arm, Vernon. CALIFORNIA: Corte Madero Creek, Lake Tahoe, Muir Woods, South Anselmo. IDAHO: Juliaetta, Moscow, Worley. OREGON: Corvallis, Eagle Ridge, Wallowa Lake. WASHINGTON: Wawawai.

RHOOGASTER ADDENDA (CRESSON)

Tenthredo addenda Cresson, Amer. Ent. Soc. Trans. 8:23; 1880. ♀.

Tenthredo vittatipes Cresson, Amer. Ent. Soc. Trans. 8:24; 1880.

♂. *New synonymy.*

Rhogogaster truncatus Rohwer, U. S. Nat. Mus. Proc. 43:211; 1912. ♀. *New synonymy.*

Rhogogaster pitohatus Rohwer, U. S. Nat. Mus. Proc. 43:211; 1912. ♀. *New synonymy.*

Slightly smaller than *lateraria* but almost identical with it in color and general structure. The females are readily distinguished by saw characters; the males are very similar and frequently difficult to differentiate except by characters mentioned in the key. The species range is very similar to that of *lateraria* but records indicate a seasonal timing two or three weeks later.

Distribution Records.—BRITISH COLUMBIA: Agassiz, Cultus Lake, Nanaimo. CALIFORNIA: Alameda, Cisco, Fallen Leaf Lake, Giant Forest, Gold Lake, Lake Tahoe, Martinez, Nash Mine, Santa Cruz Mountains. COLORADO: Manitou. IDAHO: Juliaetta, Mt. Moscow. MONTANA: Bonner. NEVADA: Reno. OREGON: Corvallis, Mt. Hood. WASHINGTON: Blue Mountains, Dayton, Easton, Elhi Hill, Garden, Olympia, Spokane, Wawawai.

SPECIES TRANSFERRED TO OTHER GENERA

Rhogogaster sayi Rohwer=*Macrophya rapae* (L.) *New synonymy.*
Rhogogaster reliqua MacGillivray = *Tenthredo olivacea* L. *New synonymy.*

Rhogogaster respersus MacGillivray = *Tenthredo olivacea* L. *New synonymy.*

AN ALTERNATE HOST RECORD FOR THE APHID, THECABIUS POPULI-MONILIS (RILEY)

On October 25, 1942, along the banks of the Arroyo Seco River in Monterey County, California, the author found apterous forms of *Thecabius populi-monilis* (Riley) on the roots of willow (*Salix* sp.).

This aphid forms bead-like pseudogalls on the upper side of the leaves of *Populus* spp. in central and southern California, and as far as the author is aware, there are no records of the migration of this aphid to the roots of any plant.

On May 12, 1942, at Gonzales, which is not far from the Arroyo Seco locality, first to third instar aphids of this species were found in bead-like galls on cottonwood. The galls persisted, and by August no living aphids in the galls were found.

At Arroyo Seco, the apterous aphids were exposed on the small, fibrous roots by turning over rocks just above water line. They were covered by a white, waxy material. This aphid preferred a habitat where leaves collected under the rocks; this apparently afforded them more protection.

Some of the aphids had wing pads, and winged forms emerged in the laboratory and were later determined as this species by Professor E. O. Essig of the University of California.—W. H. LANGE, JR.